Section 1 **MANAGEMENT OF CHANGE (MOC)**

| ABU: | Plant: | Year: |
|---|---|---|
| RLOP | Gas Recovery Plant 19 | 2010 |

| MOC No: | Originator: | Date Issued: | Passport No: | EWO No: |
|---|---|---|---|---|
| 21830 | Bleckinger, Megan R. | 4/6/2010 | | |

| Section 2 Reviewer: | MOC Category: | PSM: | MOC Type: | Expiration Date: | Other Temporary Reason |
|---|---|---|---|---|---|
| Seidlitz, Michael R. | Routine | PHA A/C | Cancelled | | |

Project/Equipment Title: Secondary Alarm for Tempered Water Flow rate

Description of Change:

PHA Additional Consideration (Recommendation):
30.4.1.1 Add an alarm to the existing 89FI747 measurement to provide an independent alarm. COD Table and 89FC745 alarm set to 700 gpm. New low flow alarm will be 700 gpm.

MOC will be required if the change will:

- ☐ Cause the use of different feed, chemicals or catalysts?
- ☑ Cause the use of different process conditions, process control, instrumentation, and protective devices or affect upstream/downstream plants?
- ☐ Cause the use of new or modified equipment [which is other than inkind]?
- ☐ Alter equipment siting, building, trailer locations, roads or fire protection?
- ☐ Require modifying existing and/or developing new procedures?

Section 2 ☑ Simultaneously Begin Construction and Start-up

| Stage 1 | Pre-Implementation | Dept./Person Responsible | Date Complete | Completed By | References |
|---|---|---|---|---|---|
| | Design Review | | | | |
| | Process Engineering Review | | | | |
| | Instrumentation Review | | | | |
| | Control System Review | Thomas, Lekha S. | | | |
| | Utilities Review | | | | |
| | Environmental/Regulatory Review | Tarter, Donald J. | 4/19/2010 | Tarter, Donald J. | |
| | Safety/Regulatory Review | | | | |
| | Building Permits Review | Linares, Elena E. | 4/20/2010 | Linares, Elena E. | |
| | Mechanical Review | | | | |
| | Inspection Review | | | | |
| | Metallurgy Review | | | | |
| | Contruction Review | | | | |
| | Leak Seal Review | | | | |
| | Relief System Review | | | | |
| | Infrastructure Review | | | | |
| | PHA/HSE Review | Bleckinger, Megan R. | 4/21/2010 | Bleckinger, Megan R. | |

Authorization to Implement Change (Begin Construction): Approver: Seidlitz, Michael R. Date: 4/21/2010

| Stage 2 | Pre-Startup | Dept./Person Responsible | Date Complete | Completed By | References |
|---|---|---|---|---|---|
| | Procedures Review | Henrickson, Alan C. | 7/19/2010 | Henrickson, Alan C. | |
| | Communication/Training 1 | Barthel, John J. | 4/21/2010 | Norris, Paul | |
| | Pre Start-up Safety Review | Bleckinger, Megan R. | | | |
| | | | | | |

Authorization to Start-Up Change: Approver: Date:

Extension of Temporary Change Approved By:

| Approver: | Expiration Date: | Extention Reason |
|---|---|---|
| | | |

| Stage 3 | Post-Startup | Dept./Person Responsible | Date Complete | Completed By | References |
|---|---|---|---|---|---|
| | Communication/Training | | | | |
| | Process Safety Information | | | | |

Change in Place - Reviews, Documentation & Testing Complete

| Approver: | Date: |
|---|---|
| | |

MOC Cancelled:

Approver: Bleckinger, Megan R. Date: 7/6/2010
Cancellation Reason: Alarm review found existing strategy to be adequate

Note 1: Emergency request for change should be routed by the Approver on the next working day | Retain Original in Division for five Years

## CONTROL SYSTEM REVIEW CHECKLIST

You have been assigned a Control System Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

**MOC Number** 21830
**Filing Reference**
**Person Responsible** Thomas, Lekha S.
**Completed By**
**Date Completed**

## Project/Equipment Description:

PHA Additional Consideration (Recommendation):
30.4.1.1 Add an alarm to the existing 89FI747 measurement to provide an independent alarm. COD Table and 89FC745 alarm set to 700 gpm. New low flow alarm will be 700 gpm.

## CONTROL SYSTEM:

- ☐ Alarm Objective Analysis
- ☐ Analyzer Instruments
- ☐ Chevmon
- ☐ Control Objectives Analysis
- ☐ Control Room Design
- ☐ Control Systems
- ☐ Control Valves
- ☐ DCS
- ☐ Egatrol
- ☐ Electrical One-lines
- ☐ Field Installation
- ☐ Flow Measurements
- ☐ Honeywell
- ☐ Honeywell Process Simulator
- ☐ Instrument Seals, Purges and Winterizing
- ☐ Intrinsic Safety
- ☐ Ladder Logic Diagrams
- ☐ Level Measurements
- ☐ Loop Diagrams
- ☐ P&ID Change due to New / Modified equipment
- ☐ P&ID's Change - Field condition not matching existing P&ID
- ☐ Pressure Measurements
- ☐ Process Alarms
- ☐ Process Control
- ☐ Relief Systems
- ☐ Shutdown Systems
- ☐ System Design
- ☐ Temperatue Measurements

## SUMMARY OF REVIEW*

*When possible include copies of documents referenced in the summary.

# ENVIRONMENTAL REGULATORY REVIEW CHECKLIST

You have been assigned a Regulatory Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

**MOC Number:** 21830
**Filing Reference:**
**Person Responsible:** Tarter, Donald J.
**Completed By:** Tarter, Donald J.
**Date Completed:** 4/19/2010

## Project/Equipment Title:

Secondary Alarm for Tempered Water Flow rate

## CHEVRON:

- [ ] Yellow Book

## REGULATORY:

- [ ] Army Corp Permit
- [ ] BAAQMD Air Regulations & Permits (including TitleV)
- [ ] Bay Conservation & Development Commission (BCDC)
- [ ] CEQA (EIR's, etc.)
- [ ] City of Richmond Conditional Use Permits (Land use and Hazardous Materials)
- [ ] City of Richmond Design Review Board
- [ ] Permit to Build and Remove Wells, County Permit Required
- [ ] Department of Transportation (DOT)
- [ ] EPA Benzene Neshap
- [ ] EPA Benzene Waste (BW) NESHAP
- [ ] EPA MACT Requirements
- [ ] EPA New Source Performance Standards (NSPS)
- [ ] Regulation 8 Organic Compounds Rule 8 Wastewater Collection and Separation Systems
- [ ] Risk Management & Prevention Plan (RMPP)
- [ ] RWQCB Waste Discharge Orders, EPA Consent Agreement Sites
- [ ] RWQCB NPDES Regulations & Permits
- [ ] RWQCB SB-1050, Waste Discharge Requirements (WDR)
- [ ] Spill Prevention & Counter Measure Plan (SPCC)
- [ ] Waste Regulations and Permits
- [ ] Wharf-related agencies (SLC, USCG, OSPR, EPA)
- [ ] [x] Additions, modifications, or deletions of VOC Component/Equip

## SUMMARY OF REVIEW*

No environmental regulatory issues.

*When possible include copies of documents referenced in the summary.

# BUILDING PERMITS REVIEW CHECKLIST

You have been assigned a Regulatory Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

| | |
|---|---|
| **MOC Number** | 21830 |
| **Filing Reference** | |
| **Person Responsible** | Linares, Elena E. |
| **Completed By** | Linares, Elena E. |
| **Date Completed** | 4/20/2010 |

## Project/Equipment Title:

Secondary Alarm for Tempered Water Flow rate

## SUMMARY OF REVIEW*

MOC signed off. A City of Richmond building permit is not required based on the information provided in the scope of work, but is required for any new construction such as: electrical, instrumentation, pipe supports, structural modifications, and etc.

*When possible include copies of documents referenced in the summary.

## INSPECTION REVIEW CHECKLIST

You have been assigned a Inspection Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

**MOC Number:** 21830

**Completed On:** 4/16/2010

**Completed By:** Bosworth, Gregory A.

**Person Responsible:** Bosworth, Gregory A.

### Project/Equipment Description:

PHA Additional Consideration (Recommendation):
30.4.1.1 Add an alarm to the existing 89FI747 measurement to provide an independent alarm. COD Table and 89FC745 alarm set to 700 gpm. New low flow alarm will be 700 gpm.

| Yes | No | Plant Protection/Security Review |
|---|---|---|
| ☐ | ☑ | City Fire-Plan Review is Mandato |
| ☐ | ☑ | City Fire-Permit is Mandato |
| ☐ | ☑ | City Acceptance Test is Mandato |
| ☑ | ☐ | Office of Fire Prevention Review On |

The scope of work has been reviewed by the Chevron Fire Marshal. Scope of work does not constitute a change in fire protection.

*When possible include copies of documents referenced in the summary.

# HEALTH & SAFETY EVALUATION

| | | | |
|---|---|---|---|
| **Date Issued:** | 4/6/2010 | **Maximo Number:** | |
| **ABU:** | RLOP | **EWO Number** | |
| **Plant:** | Gas Recovery Plant 19 | | |
| **Section 2 Reviewer:** | Seidlitz, Michael R. | | |
| **Project/Equipment Title:** | Secondary Alarm for Tempered Water Flow rate | | |
| **Description:** | PHA Additional Consideration (Recommendation):<br>30.4.1.1 Add an alarm to the existing 89FI747 measurement to provide an independent alarm. COD Table and 89FC745 alarm set to 700 gpm. New low flow alarm will be 700 gpm. | | |

| | | | |
|---|---|---|---|
| **MOC Number** | 21830 | | |
| **Filing Reference** | | | |
| **Person Responsible** | Bleckinger, Megan R. | | |
| **Completed By** | Bleckinger, Megan R. | | |
| **Date Completed** | 4/21/2010 | | |

**Step 1:** ☐ **Notify USW** ☐ **USW Representation Present** **USW Representative:**

**Worker's Committee Member/Steward's comments if unable to attend:**

☐ **Notify Trainer** ☐ **TrainerRepresentation Present** **Training Representative:** John Barthel

**Step 2:** **Involve: Operations, Maintenance, Technical and others with appropriate expertise relevant to the change (CRTC, Contractors, etc)**

**Attendees:** Mike Demcsak, Jimmy Htut, Megan Bleckinger

**Step 3:** **Think about the task at hand. Discuss the existing situation. Discuss the change. Discuss the impact of the change on the existing situation. Determine the training requirements for this change.**

**Step 4:** **Training Type:** 1

**Develop a list of concerns, consider your options, consider your following:**

*H2S *NH3 *Acid *Caustic *Benzene *Fall Protection *Staging *Scott Air *PPE *Hot Work *Confined Space Entry *Evacuation Plan *Safety Operator

| Concern | Consequence | Mitigation | Proceed Safely |
|---|---|---|---|
| redundant alarm | Redundant needed since other alarm is in DCS. This additional alarm acts as another safe guard | Add additional alarm | Yes |

**HSE Action Items**

**Additional Comments**

N/A

## PROCEDURE REVIEW CHECKLIST

You have been assigned a Procedure Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

| | |
|---|---|
| **MOC Number** | 21830 |
| **Filing Reference** | |
| **Person Responsible** | Henrickson, Alan C. |
| **Completed By** | Henrickson, Alan C. |
| **Date Completed** | 7/19/2010 |

## Project/Equipment Description:

PHA Additional Consideration (Recommendation):
30.4.1.1 Add an alarm to the existing 89FI747 measurement to provide an independent alarm. COD Table and 89FC745 alarm set to 700 gpm. New low flow alarm will be 700 gpm.

- ☐ Alarm Procedures
- ☐ Any Special or unique hazards
- ☐ COD/Ops Monitor
- ☐ Consequences of deviation
- ☐ Control measure to be taken if physical contact or airborne exposure occurs.
- ☐ Precautions necessay to prevent exposure, including administrative controls, engineering controls, and personnel protective equipment.
- ☐ properties of, and hazards presented by, the chemicals and operation of the process.
- ☐ References to additional procedures, such as Safe Work Practices
- ☐ Routine Duties
- ☐ Safety system and their functions
- ☐ Steps required to correct and/or avoid deviation

**Steps fo each operatong Phase**

- ☐ Emergency
- ☑ Normal
- ☐ Start-Up/Shutdown
- ☐ Temporary

## SUMMARY OF REVIEW*

Added 89FI747 to COD table pg. 24.

*When possible include copies of documents referenced in the summary.

# Stage Two Training and Communication Review

1/29/2013 10:03:18 AM

**MOC No:** 21830

**Date Completed:** 4/21/2010

**Completed By:** Norris, Paul

**Person Responsible:** Barthel, John J.

- [x] **Identify the affected employees.**
  - * **Maintenance and Technical affected?**
  - * **Employee who will require training to start up the change based on the level of training.**
  - * **Employees who will receive training after the start up BUT before they can perform work affected by the change**
- [ ] **Procedures have been modified/written (Ops/SSO/Trainer)**
- [ ] **Identify the affected employees..**
  - * **Lesson plan cover sheet (includes training objective statement and list of affected employees)**
  - * **Procedural changes (Standing Orders, mark-ups)**
  - * **Flow daigrams (final or mark-ups)**
- [ ] **Determine level of training**
- [ ] **Training has been scheduled**
- [ ] **Affected employees have been trained in order to start up the change.**

**Project/Equipment Title:**

Secondary Alarm for Tempered Water Flow rate

**Summary of Review:**

PHA Additional Consideration (Recommendation):
30.4.1.1 Add an alarm to the existing 89FI747 measurement to provide an independent alarm. COD Table and 89FC745 alarm set to 700 gpm. New low flow alarm will be 700 gpm.

## APPENDIX III

## PRE-START-UP SAFETY REVIEW CHECKLIST

You have been assigned a Pre Start-Up Safety Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

**Passport No:**
**EWO No.:**
**MOC PSSR.:** 21830.001

**MOC Number** 21830
**Filing Reference**
**Person Responsible** Bleckinger, Megan R.
**Completed By**
**Date Completed**

**Project/Equipment Description:**

Secondary Alarm for Tempered Water Flow rate

**Subsystem:**

**NOT** The PSSR facilitator shall involve employees with expertise in process operations, maintenance, and engineering, based upon their experience and understanding of the process system being evaluated.

**The following requirements for PSSR shall be addressed:** **Approved by:** **Date**

1. Has the equipment and construction been completed in accordance with the critical design specifications?
   Some examples of how this may be accomplished are:
   * Review of equipment quality assurance and inspection records.
   * Review of construction inspection records.
   * P & ID "check" after mechanical completion, and facility "walk-through" inspection.

   **Justification:**

2. Are Safety, operating, manintenance, and emergency procedures in place and adequate?
   * The phrase "in place and adequate" means: written, reviewed, approved, and accessible to employees requiring the procedures in their work.
   * This does not prevent the use of "mark-up" procedures to satisfy the requirement, but these must undergo the same review and approval and training interaction as would "the final version" of the same procedure and would require rigorous control.

   **Justification:**

3. Has the communication or training of affected operating, maintenance, or contract workers been completed?
   * Maintenace employees, contractors, and other employees whose work is affected by the change must be informed of the change and training in the impact on their job tasks before the changed equipment is started up.

   **Justification:**

4. Have the quality assurance goals of mechanical integrity been met?
   * Ensure that changes are suitable for the intended service.
   * Ensure that the quality of the work is acceptable.
   * Ensure that the quality of the Leak Seal is acceptable.

   **Justification:**

5. Have all recommendations resulting from PHA's or HSE's been addressed of resolved
   * Ensure tall Recommendations have been documented as addressed or resolved

## APPENDIX III
## PRE-START-UP SAFETY REVIEW CHECKLIST

You have been assigned a Pre Start-Up Safety Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

**Passport No:**
**EWO No.:**
**MOC PSSR.:** 21830.001

**MOC Number** 21830
**Filing Reference**
**Person Responsible** Bleckinger, Megan R.
**Completed By**
**Date Completed**

**Project/Equipment Description:**

Secondary Alarm for Tempered Water Flow rate

**Subsystem:**

**Justification:**

Are there any safety-related exceptions encountered during the PSSR that require follow-up after started up? ☐ **Yes**

**Miscellaneous Comments:**

| *Exception* | *Owner* | *Completed By* | *Completed On* | *Notified* |
|---|---|---|---|---|